

Outdoorsmen Gain a Smarter Remote Eye on Wildlife.

Trail cameras bring game sightings right to the cellphones of outdoorsmen who live for the thrill of the hunt. But early offerings suffered from poor image quality, poor image capture and short battery life. Bushnell, a trail cam leader, partnered with iENSO to overcome these issues and create a line of premium products befitting its brand and reputation.

OVERVIEW

Trail cameras are not only attractive to hunters. Wildlife enthusiasts and those concerned with the protection of remote property are also interested in a quality trail camera that combines HD image capture and processing capabilities with advanced wireless data communications. For all of these users, a modern trail camera serves as a powerful node for the Internet of Things (IoT).

iENSO translated this into a set of interrelated design requirements: faster trigger speeds, faster recovery time, faster wireless data transmission, higher resolution images, optimized IR illumination, more effective integration of the motion detector sub-system and a system-wide optimization of battery power utilization.



Turnkey Embedded Vision System



Faster Trigger Speed



Faster Recovery Time



Faster Wireless Data Transmission



Higher Resolution Images



Motion Detector Integration

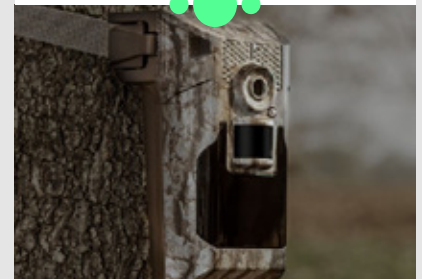
APPLICATION

Trail Camera

CHALLENGES

More and better quality images and extended battery life at a consumer-friendly price point

The Impulse Cellular Trail Camera combines several advanced technologies in an IoT device that delivers more than the sum of its parts.



iENSO makes intelligent, connected vision systems for companies that need to embed cameras, image processing and data connectivity capabilities in their products.

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SOLUTION

Optimized integration

iENSO developed a turnkey embedded vision system comprised of a camera module using Sony's 8.1MP IMX317 image sensor and OSRAM IR LEDs, an A83T based signal processing module that implements the octa-core cortex A7 processor from Allwinner, and a data connectivity module featuring Quectel LTE Cat1 radios (EC21-A and EC21-V) and an AMPAK BT/WIFI module.

Factory floor expertise

iENSO also took Bushnell's requirement one step further with expert manufacturability methodology and factory setup services. Thanks to its industry-leading expertise, iENSO delivered an innovative EVS design that could be produced in quantity without sacrificing image quality, image tuning requirements or proper lens alignment.

Successful market launch

The result was Bushnell's Impulse Cellular Trail Camera. This consumer-friendly and affordable advanced IoT imaging system has helped Bushnell set a new standard for trail camera technology.

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The new Impulse makes it faster than ever to get connected with easy setup to any smartphone and any provider, with no contract. Ultra-fast dual processors work simultaneously to capture and upload a picture to the cloud every 15 seconds versus the 1-per-minute offered by competitor cameras. This means you get more images of each animal. And it's loaded with smarter features—like the ability to sort photos by weather and wind data, GPS anti-theft alerts, and live camera views from a smartphone.

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